



London
CANADA

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Chapter 1

Introduction

Design Specifications & Requirements Manual

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City of London

Design Specifications and Requirements Manual

The design information contained in this manual is intended to provide guidance beyond legislative and standard design practices for use in the City of London (the City). There will be site specific situations where the design will depart from these practices as it is not possible nor is it the intention of the City to anticipate every situation. The City intends to review and revise the Manual from time to time. The City also acknowledges that other references such as the 'Standard Contract Documents for Municipal Construction Projects' are to be used in conjunction with this manual. The 2012 update of this manual incorporates design information from the City's former 'Subdivision & Development Guide Manual' to provide consistent and current design information for development projects.

The City of London maintains its right to accept or refuse any design submissions and requires an acceptable design for any given circumstance.

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1 Introduction

The information contained herein comprises the “Design Specifications and Requirements” which are to be utilized for the design of works within the City of London on municipally owned road allowances, municipally owned property and for municipally owned infrastructure on easements.

The design information contained in this manual is intended to provide guidance beyond legislative and standard design practices for use in the City of London (the City). There will be specific situations where the design will depart from these practices as it is not possible nor is it the intention of the City to anticipate every situation.

This document, along with the City of London Standard Contract Documents for Municipal Construction Projects, the Ontario Provincial Standard Specifications (OPSS), the Ontario Provincial Standard Drawings (OPSD), and the City of London Facility Accessibility Design Standards (FADS) provide the basis for the design of municipal construction projects and works intended for assumption by the City of London. Where specific design information for new subdivisions is not applicable to other sections in this manual, it is added to **Chapter 18, Drafting and Design Requirements**.

For specific Streetscape designs, refer to **Chapter 20, Area-Specific Streetscaping Standards** for details that are beyond the transportation design standards.

These specifications and drawings may be revised from time to time as considered necessary by the City of London. It will be the responsibility of the professional engineer who is performing the contract administration for the work to verify that the installation of these systems will be in accordance with the latest revision of these Specifications.

The City of London maintains its right to accept or refuse any design submissions. The City requires an acceptable design for any given circumstance. Notwithstanding any item that may be contained or not included herein, the decision of the City concerning any matter shall be final.

Both municipally managed and development led projects should be considered a service delivery to present or future taxpayers of that area. Responsible service delivery is achieved through balancing the technical needs of the project proponent with the social costs to the taxpayers.

The recently published National Guide to Sustainable Municipal Infrastructure, known as the ‘InfraGuide Best Practices’, has listed numerous initiatives which better recognize social costs of construction and suggest methods to address these costs. One of the primary requests of the public is to pay greater attention to reducing disruption to businesses and to the traveling public. A post 2004 Environmental and Engineering Services Department construction survey confirmed that although London taxpayers were generally happy with construction quality, they desired better attention to maintaining through traffic, maintaining accesses, and more communication of planned closures.

The primary goals of managing projects, whether City or development led, in right of ways include:

1. Public and worker safety;
2. Quality of work and appropriate payments;
3. Maintaining access to businesses and homeowners whenever possible;
4. Maintaining through traffic for vehicles and pedestrians;
5. Ensuring proper insurance coverage and risk management;
6. Minimizing inconvenience from noise, dust, delay, and vibration; and
7. Providing timely and accurate information regarding ongoing construction.

1.1 General Information

1.1.1 Definitions

For the purpose of these specifications, the following definitions will be recognized:

“City” shall mean The Corporation of the City of London.

"Contractor" means a person, partnership, or corporation who contract to undertake the execution of work commissioned by the City to install or maintain sewers, private drain connections, maintenance holes, catch basins and other appurtenances.

"Developer" shall mean the Owner or party specifically named in a Development Agreement or in a Subdivision Agreement.

"Engineer" shall mean the City Engineer for the City of London or the City Engineer's authorized representative.

"Inspector" means the person(s) authorized and supplied by the City to see that the installation is executed according to the specifications and the approved plan(s) in a good workmanlike manner according to the latest City of London practices and standards.

"Main" means every water pipe, except services and portions of private mains as herein defined, installed on the public road allowance or on any other land upon which the City has obtained easements.

“OPSD” means Ontario Provincial Standard Drawings.

"Owner" shall include any person who or any firm or corporation that is the registered owner of the property under consideration or any agent thereof, a person entitled to a limited estate in land, a trustee in whom land is vested, a committee of the estate of a mentally incompetent person, an executor, an administrator and a guardian.

“OBC” means Ontario Building Code.

"PDC" means a private drain connection.

"Product Approval Committee" means the committee that approves products which may be used for construction of works which on City of London Projects or works which will be assumed by the City of London.

"Subdivider" means the Owner or Party specifically named in a Subdivision Agreement.

"Water Service" means every water pipe installed from a connection on a main or private main to the meter location or, for a fire service, to the inside of the exterior wall of a structure.

"Water Service extension" means the portion of a water service from the property line to the meter location, or for a fire service to the inside of the exterior wall of a structure, i.e. an extension of a service stub.

"Water Service stub" means the portion of a water service from a main to the property line which will always include one control valve.

"UCC" means Utilities Coordinating Committee which is a committee made up of representatives of utility companies and City of London Administrative staff coordinating the construction of and the location of utilities within City road allowances.

1.1.2 Metric Usage

All plans, drawings, specifications, details, descriptions, notes or any other terms included in the Engineering drawings, specifications and tender package are to be dimensioned or referred to in the Metric system of measurement.

1.1.3 Location of Utilities

1.1.3.1 Typical Right-of-ways

All works to be located in a City right-of-way are to be located in accordance with UCC drawing U.C.C.-1M (2002-05-23). Refer to Figure 1.1 of The City of London Utilities Coordinating Committee (U.C.C.) Orientation Manual for additional details. Locating works in non-standard locations from these must be approved by the appropriate division, Development Services, and the Utility Coordinating Committee. Additional information about the UCC can be found on the [City of London's webpage](#).

1.1.3.2 Window Street Rights-of Ways

All works to be located in a window street right-of-way are to be located in accordance with UCC drawing UCC-2M. Refer to Figure 1, 2, 3.1, 3.2, 3.3 of the City of London Utilities Coordinating Committee (U.C.C.) Orientation Manual. Additional information about the UCC can be found on the [City of London's webpage](#).

1.1.4 Drawing Standards

Information relating to Drawing Standards, Legal Plan submission requirements, Record Drawings, and Digital drawing submission requirements can be found under “Plan Submission Standards” on the [City of London's webpage](#).

1.1.5 Standard Drawings

Reference to City of London SR, SW and W-CS are City of London Standard Drawings and are found in the City of London's Standard Contract Documents for Municipal Construction Projects. The “Standard Contract Documents for Municipal Construction Projects” can be found on the [City of London's webpage](#).

1.1.6 Municipal Consent Application (MCA)

Prior to construction of works on public property, the Owner or their agent must file a Municipal Consent Application and receive approval from the Utilities Co-ordinating Committee (UCC) for work on Public Property.

The City's Municipal Consent Application (MCA) process has been computerized and is available on the [City of London's webpage](#). A copy of the MCA program manual in **pdf** can be provided by the City of London's Geomatics division. All users and applicants must first register to gain access. To register, please download and print the MCA Registration Form in **pdf** and return the completed form to the attention of the UCC Secretary by email or by fax 519-661-6422. Once registered, you will be sent a login and password by email.

In situations where the road will be assumed by the City at a future date, and the works are in a non-standard location, this deviation must also be approved by UCC.

1.1.7 Innovative Design Submissions

These requirements must be applied to all design applications. It is recognized that in some instances, unique circumstances may arise where some requirements cannot be accommodated. In these cases, the onus is on the proponent to demonstrate how the proposed design deviates from the requirements, yet still meets the spirit and intent of this overall document. Deviations must be reviewed and accepted by the appropriate divisions in Environment & Infrastructure and approved by the City Engineer.

1.1.8 File Manager Process

New Draft Plan Applications will be processed through the new File Manager Process (implemented May/June 2008). Additional information, reference material, Guidelines,

Templates, etc. relating to the File Manager Process can be found on the [City of London's webpage](#).

1.1.9 Facility Accessibility Design Standards

All works to be constructed within a City of London road allowance, municipally owned property or on municipally owned easements are to be consistent with the Facilities Accessibility Design Standards. Information on facility accessibility can be found on the [City of London's webpage](#).

1.1.10 Design Manual Standard Drawings

All standard drawings contained within this Design Specifications and Requirements Manual are not to scale.

1.2 Acknowledgement of Sources

This document consists of a compilation of design practices used by the City of London. It has not been the City of London's objective to develop servicing design information. Rather, this compilation consists primarily of information that has been developed by the other agencies and governments, chosen by the City of London for use within our municipality.

The City of London acknowledges the following sources of design practices in the development of this document.

1. Corporation of the City of London Water By-Law W-1, Regulation of Water Supply in the City of London;
2. Corporation of the City of London Drafting Standards and Submission Requirements (Revised February 2, 2018);
3. Corporation of the City of London Sanitary Sewerage Servicing Study;
4. Corporation of the City of London Standard Contract Documents for Municipal Construction Projects;
5. Corporation of the City of London Stormwater Management Pond Guidelines (Rev. June 1998, and Council amended July 2002);
6. Corporation of the City of London Zoning By-Law No. Z-1, (October 2011);
7. Corporation of the City of London Policy Manual;
8. Corporation of the City of London Official Plan
9. Fire Underwriters Survey, Water Supply for Public Fire Protection, A Guide to Recommended Practice, (1999);

10. Ministry of the Environment, Guidelines for the Design of Water Distribution Systems, (latest revision);
11. Ministry of the Environment, Stormwater Management Practices, Planning and Design Manual, (March 2003);
12. Ministry of the Environment, Noise Assessment Criteria in Land Use Planning, (October 1997);
13. Ministry of Natural Resources, Guidelines on Erosion & Sediment Control for Urban Construction Sites, (TRCA, 2019);
14. Ministry of Transportation, Geometric Design Standards for Ontario Highways;
15. Ministry of Transportation, Noise Barrier Wall Guidelines;
16. Municipal Engineer's Association Municipal Works Design Manual (2nd Edition, 1984);
17. Ontario Building Code;
18. Ontario Concrete Pipe Association;
19. Ontario Provincial Standard Specifications;
20. Ontario Provincial Standard Drawings;
21. Ontario Traffic Manuals;
22. Ontario Water Resources Act;
23. Public Utilities Act;
24. Transportation Association of Canada, Geometric Design Guide for Canadian Roads, (2017);
25. Transportation Association of Canada, Canadian Guide to Neighbourhood Traffic Calming (Second Edition 2018).